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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 10/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,838

Applicant(s)

KASZTELAN ET AL.

Examiner

Christina Ildebrando

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-12, in Paper No. 8 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al.

Pollitzer et al. (US 3,730,878) discloses a zeolite catalyst composition useful in hydrotreating processes, including hydrocracking processes. Pollitzer et al. teaches that the catalyst contains a porous amorphous carrier such as alumina or a silica alumina composite containing a group VI metal component and a faujasite zeolite carrier material containing a group VIII metal component (column 3, lines 40-50). It is taught that the group VIII and group VI metal components are separately combined with their respective carriers and are then mixed together (column 4, lines 55-60). Suitable group VI metals include molybdenum, chromium, and tungsten and suitable group VIII metals

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include iron, cobalt, and nickel (column 3, lines 50-55). The catalyst contains from 4-30% by weight of the group VI metal and from 1-10% by weight of the group VIII metal (column 3, lines 60-70). Regarding claim 12, it is the position of the examiner that, given the process conditions described by the reference, at least some of the metallic radicals would be in sulfide form.

The process limitations in claims 10-11 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Pollitzer does not teach that the catalyst composition contains at least one promoter element selected from the group consisting of phosphorus, boron, and silicon.

Jan et al. (US 5,393,409) discloses a catalyst composition useful in catalytic cracking processes. Jan et al. teaches that the catalyst composition comprises a bound faujasite zeolite component (column 1, lines 64-69) in combination with hydrogenation components such as group VIB and Group VIII metals (column 7, lines 40-45, 65-69 and column 8, lines 5-10). The composition may further comprise a promoter element such as phosphorus or boron (column 8, lines 24-29).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of Pollitzer in light of the teachings of Jan et al. Jan et al. teaches that additional catalyst ingredients, such as promoter elements are known in the art and are useful when combined with a bound faujasite

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zeolite. Because both catalysts can be used in the same or similar processes of use, one would have reasonable expectation of success from the combination.

With regards to claim 7 that requires the presence of both boron and silicon, it is noted by the examiner that the Pollitzer reference teaches that silica can be added to the alumina matrix in an amount of 10-90% by weight. Refer to column 4, lines 5-10. It is the position of the examiner that this added silica would meet the limitation of promoter, given the ranges and quantities instantly claimed.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al. as applied to claims 1, 5-7, and 9-12 above, and further in view of Koepke et al.

Pollitzer in view of Jan et al. is applied as above for claims 1, 5-7, and 9-12.

The modified disclosure of Pollitzer does not specifically teach the use of a Y zeolite or a dealuminated zeolite.

Koepke et al. (US 4,777,157) teaches that for hydrocracking processes, the use of a Y zeolite in dealuminated form is preferred (column 2, line 60- column 3, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the disclosure of Pollitzer to include the use of zeolite Y or a dealuminated zeolite Y in light of the teachings of Koepke et al. Pollitzer teaches the use of faujasite zeolites, which includes zeolite Y. One would have been motivated by the teachings of Koepke et al. to specifically choose zeolite Y in light of the disclosure that in hydrocracking operations, the use of zeolite Y is conventional and preferred.

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5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollitzer in view of Jan et al. as applied to claims 1, 5-7, and 9-12 above, and further in view of Shi et al.

Pollitzer in view of Jan et al. is applied as above for claims 1, 5-7, and 9-12 above.

The modified disclosure of Pollitzer further does not teach that the catalyst composition contains elements of group VIIA.

Shi et al. (US 5,972,832) discloses a catalyst composition useful in hydrocracking processes. Shi et al. teaches that the catalyst composition comprises fluorine, nickel and tungsten oxides, alumina, and a zeolite such as Y zeolite (column 2, lines 20-25 and column 4, lines 5-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the invention of Pollitzer in light of the teachings of Shi et al. Shi et al. teaches that additional catalyst ingredients, such as fluorine, are known in the art and are useful when combined with a faujasite zeolite such as zeolite Y. Because both catalysts can be used in the same or similar processes of use, one would have reasonable expectation of success from the combination.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 22 of copending Application No. 09/603,837. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Copending application No. 09/603,837 discloses and claims a catalyst comprising at least one matrix, at least one zeolite, at least one element that is located at the matrix and selected from the group consisting of groups VIB, VIII, and VB, at least one promoter element, wherein the zeolite contains at least one element of group VB in its porous network (claim 1). The zeolite also contains at least one element of group VI and/or group VIII in its porous network (claim 4).

The difference between the instant claims and the claims of '837 is that the instant claims do not require the presence of a group VB element. However, one of ordinary skill would recognize that the instant claims do not exclude the presence of additional elements, even in major proportions.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Declaration under 37 CFR 1.132

8. The Declaration under 37 CFR 1.132 filed 8/5/02 is insufficient to overcome the rejection of claims 1-12 based upon Pollitzer as set forth in the last Office action because:

a. Applicant has not presented any comparison with the closest prior art.

Applicant has compared a catalyst with the hydrogenation metal deposited on the exterior of the catalyst. However, Pollitzer teaches that the group VIII metal is located within the pores of the zeolite. Refer to the discussion below.

b. Applicant has not presented any evidence commensurate in scope with the claims. The evidence in the Declaration is limited to the use of a single zeolite, specific metals, and minor concentrations of the metallic components, while the claims encompass all metals from group VI and VIII and do not require any particular zeolite.

c. The Declaration is directed towards the non-obviousness of one species in one process of using. This showing is insufficient to demonstrate non-obviousness of the product.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Arguments

9. Applicant's arguments filed 8/5/02 have been fully considered but they are not persuasive.

Applicant argues that both the Pollitzer and Jan references fail to teach or suggest a zeolite having a porous network containing at least one element of group VIB or group VIII. The examiner disagrees with applicant's characterization of the teachings of the reference. With reference to column 4, line 67 – column 5, line 2 of '878, Pollitzer discloses: "As a result of the relatively small pore openings of the zeolitic material, the larger hydrocarbon molecules in the feed stock are prohibited from contact with the Group VIII metal component and cannot therefore, undergo dehydrogenation... However, hydrogen has complete access to the metal components, through diffusion, with the result that the necessary hydrogen atoms are produced and will diffuse out of the particle to enhance the rate of the hydroprocessing reaction." The reference specifically teaches that the group VIII metal is located within the pores of the zeolite such that only hydrogen is contacted with the metal components and larger molecules which are prohibited by the pores of the zeolite are prevented from contacting the metal components.

Applicant further argues that there is no motivation to combined the Pollitzer reference with the Jan et al. reference. The examiner disagrees. The Jan et al. reference is relied upon only to teach the promoters such as phosphorus and boron are known and conventional in hydrocarbon conversion processes, thereby giving one of ordinary skill motivation to use it. Applicant argues that while Jan et al. discloses the use of boron and phosphorus but states that their presence is not preferred. This argument has been considered but is not persuasive. First, it is the position of the examiner that the reference is referring to the combination of boron and phosphorus, not to the use of

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a promoter in general. Second, a non-preferred embodiment does not constitute a teaching away. In this case, it is considered that the reference teaches that the promoters may be used in a hydrocarbon conversion process.

With regards to the Koepke et al. reference, applicant argues that Koepke et al. teaches that niobium and other hydrogenation components are deposited on the exterior of the catalyst. This argument has been considered but is not persuasive. The Koepke et al. reference is relied upon only to teach the use of a dealuminated zeolite. It is considered that Pollitzer teaches the particulars of the catalyst as claimed.

With regards to the Shi et al. reference, applicant argues that the reference fails to teach a catalyst having a group VI or VIII metal contained in the porous network of the zeolite. This argument has been considered but is not persuasive. The Shi et al. reference is relied upon only to teach the use of a halogen component. It is considered that Pollitzer teaches the particulars of the catalyst as claimed.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

CAI
September 30, 2002


TOM DUNN
SUPERVISORY PATENT EXAMINER
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